

# Peer and Parent-Child Interaction Before and After Enrollment in Nursery School\*

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Forty-five three-year-olds and their parents participated in the research. Twenty-four of the children were observed two months and one week before, as well as two months after, enrollment in a nursery school. The others were observed at comparable intervals, but remained at home in the fulltime care of their parents. On all occasions, the children who were about to enter or had entered nursery school engaged in more positive interaction with and sought more proximity to their parents than the home care children did. These tendencies were unaffected by enrollment in nursery school. There were no differences between nursery school and home care children on measures of peer interaction either before or after nursery school began. The need to consider differences between nursery school and home care children that antedate enrollment is emphasized.

As the recent review by Belsky and Steinberg (1978) attests, there is considerable interest in determining whether and how extrafamilial care for preschoolers affects their socioemotional and cognitive development. The research conducted thus far has not yielded clear and persuasive findings because methodological and conceptual confounds plague many of the studies in this area. One such flaw is the implicit assumption that at the time of enrollment in day care or nursery school, children are indistinguishable from peers who continue to be reared at home. Thus any difference between day care and non-day care children is attributed to the substitute care experience. The present study was designed to test

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whether children whose parents enroll them in nursery school programs differ from those whose parents choose to keep them at home. In order to assess this, children who were destined to enter nursery school were observed—prior to as well as after enrollment—in interaction with their parents and unfamiliar peers. Their behavior was compared with that of a comparable group of children similar in all respects except that they were not enrolled in nursery school. The children all came from upper-class and upper-middle-class families; most mothers did not need to or want to work and so the decision to place children in nursery school was based on the assessment that this would be beneficial for them. On the basis of our prior contact with such families, we predicted that children would be enrolled at nursery school (a) if parents wished to lessen dependence on themselves or (b) if they wished to maximize the opportunity for formative interaction with peers. In order to determine whether future enrollees indeed differed from nonenrollees in their dependence on parents or their social competence with peers, we observed the children with their parents and an unfamiliar peer two months before and one week before nursery school began. In order to determine whether these differences were eliminated or reduced shortly after enrollment, the children were observed once again two months after nursery school began.

## METHOD

### Subjects

Twenty-six female and 19 male three-year-olds (Range: 24–48 months:  $X = 3.2$  years) and their parents were participants in this study. All of the children had been cared for at home by their parents prior to the first observation. Twenty-four of the children were scheduled to enter a substitute care program two months after the first observation (Nursery Group), while 21 were raised fulltime by their parents (Home Care Group). Ninety-two percent of the children had at least one sibling (80% of those in the Nursery Group, 95% of those in the Home Care Group). The sample was primarily upper-middle class: 95 percent of the children in the Nursery Group and 67 percent of those in the Home Care Group were classified in the three upper-middle classes of Hollingshead's (1957) seven-point Occupational Scale. The remainder were in category 4 (Clerical and Sales Workers, Technicians, and Small-business owners). About 50 percent of the eligible mother-father-child triads contacted for either group agreed to participate.

The Nursery children were recruited through three private centers in the area. The caretaker-child ratio in all centers was 1:7. The children attended the center five days a week for five hours each day. The names of the children who were scheduled to enter nursery school were obtained from the directors of the centers three months prior to enrollment. Parents were contacted by means of a letter followed by a phone call.

The children in the Home Care group were obtained by selecting from

published birth records families that resided in the same neighborhood as the Nursery children. Again parents were contacted via an introductory letter and follow-up phone call.

The Nursery children were observed in a laboratory playroom two months preceding their enrollment, one week before enrollment, and again two months later. The Home Care group were observed three times in the same circumstances, except that they were not enrolled in any substitute care program between the second and third observations.

### Procedure

Each observation session comprised two 15-minute episodes during which two unfamiliar children from the same group were observed together. In one episode, the two mothers were present, and in the other the two fathers were present. With three exceptions (two in the Home Care group and one in the Nursery group) all the children were observed with both parents. The three children whose fathers could not participate were observed with their mothers for the entire 30-minute session. The order of the episodes was varied systematically such that fathers and children were observed first half the time. The episodes followed immediately after one another with the interepisode intervals permitting only the entrance and exit of the parents.

The families were observed in a large playroom (6.0 m  $\times$  7.5 m) in which were placed two chairs for the parents (2.5 m apart), a couch, a table, three wooden appliances, a wooden slide, and 26 smaller toys. With the exception of a large toy 1.2 m from both parents, all the toys were at least 2.5 m from the chairs. The parents were instructed to refrain from initiating interaction with or between the children, but were asked to respond normally when the children initiated interaction with them. They were asked to remain in their chairs while in the room. The children were not aware that they were being observed.

From behind a one-way mirror, two observers each recorded the behavior of one of the children. The observers used the SSR keyboard, a modified event recorder which permits computerized transcriptions of audiotaped records (Stephenson, Smith & Roberts, 1975). The observers recorded the interaction which their target child had with the unfamiliar peers and the adults using the combined observation categories of Eckerman, Whatley and Kutz (1975) and Lamb (1976). The following behaviors and their target (peer, parent, other child's parent) were recorded: vocalizing, smiling, laughing, offering a toy, accepting an offered toy, imitating the peer's actions, engaging in coordinated play with the other child, playing with the same toys as the other child, looking at a person or his/her activities, being within proximity (3 ft.), touching, striking, struggling, and seizing (taking) a toy. Readers are referred to Eckerman et al. (1975) and Lamb (1976) for the detailed operational definitions. For the purposes of analysis we considered the following measures: positive social behaviors (sum of vocalizing, smiling, laughing, offering a toy, imitating the other child's be-

havior), negative social behaviors (striking, struggling, taking away a toy), play (coordinated or same toys—peer interaction measure only), proximity, and touching. The last three were duration measures (in seconds), the other two measures were frequency measures.

### Reliability

Five observers shared responsibility for all observations. Prior to their first observation, each observer coded videotapes of child-child-adult interaction until interscorer agreement (computed in the manner described below) of 80 percent was reached in all scoring categories. During the study, 20 checks on reliability were conducted by having two observers simultaneously record the behavior of the same child. Intercoder agreement on each measure was computed by dividing the smaller of the two observers' scores by the larger and multiplying by 100. Coefficients ranged from 75 percent (positive interaction) to 96 percent (negative interaction).

## RESULTS

Initial analyses revealed no sex differences in interaction with either parents or peers. Thus the data for boys and girls were combined. Similarly, initial analyses revealed no differences in the behavior directed toward mothers and fathers, and so data were combined across this factor as well. For the purpose of the analyses reported below the scores for the two children observed together were combined. Thus all data refer to dyad scores rather than the scores of individuals. This makes for much more conservative tests of the hypotheses. The hypotheses were tested in 2 (Group: Nursery or Home Care)  $\times$  3 (Time: 2 months before, 1 week before, 2 months after) repeated measures analyses of variance.

Analysis of the measure of child-parent interaction yielded a significant multivariate effect for Group ( $F$  5, 119 = 3.77,  $p$  < .003). Two of the univariate tests were also significant: they showed that the Nursery children directed more positive social behaviors to their parents than the Home Care children did ( $\bar{X}_N$  = 106.9,  $\bar{X}_{HC}$  = 70.15,  $F$  1, 123 = 10.92,  $p$  < .0013) and that they spent more time than the Home Care children in proximity to their parents ( $\bar{X}_N$  = 544.2,  $\bar{X}_{HC}$  = 380.7,  $F$  1, 123 = 5.33,  $p$  < .023). There was no significant group difference in negative interaction or touching. More surprisingly, there were no significant effects for Time, and no significant interactions between the Time and Group factors.

Analysis of the measures of peer interaction yielded no significant main effects for Group or Time and no significant interaction between these two factors.

## DISCUSSION

These data indicate quite clearly that children who are enrolled in nursery school may differ in important ways from children not so enrolled, and that these differences antedate the time of enrollment. The pre-enrollment differences we found indicated that nursery school children sought more interaction with and proximity to their parents than Home Care children did. On a one-item questionnaire focused on the reasons why their children were or were not attending nursery school, all of the parents of Nursery children reported that children need interaction with adults other than their parents as well as with other children. Parents of the Home Care children claim that children need to be around parents during the first few years, and that siblings or neighbors assured "sufficient" interaction with other children. The existence of pre-enrollment group differences makes it imperative that future studies on the "effects" of enrollment in nursery school or day care incorporate both pretest and posttest assessments. It is clearly unreasonable to assume (as prior researchers have done) that any differences between children who are and are not in substitute care facilities can be attributed to the day care or nursery school experience. Indeed, in the present study, there was no evidence that the nursery school experience affected the preexisting group differences in any way, although our postenrollment observation occurred too soon after enrollment to permit a sensitive measure of the effects of enrollment. Nevertheless, the existence of systematic pre-enrollment differences underscores the need for pre-enrollment assessments in future studies of the effects of nursery school attendance. It would be valuable in future research to determine whether significant effects of enrollment are evident after a longer period of nursery school or day care experience. Several other issues merit attention in the future. It would be important, for example, to determine whether the differences we observed are evident outside the standardized laboratory situation here studied. In addition, we need to determine what differences (if any) distinguish between nursery/day care enrollees and home care children from families less affluent than those studied in the present research.

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